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# NEW ENGLAND AQUARIUM

## SITE STUDY

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# NEW ENGLAND AQUARIUM

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## SITE STUDY

For

NEW ENGLAND AQUARIUM  
THE BEACON COMPANIES

August 14, 1987

Skidmore, Owings & Merrill



## Introduction

When the New England Aquarium opened its doors in 1969, it revealed uncommon innovation and foresight. The Aquarium's award-winning design and spectacular 187,000 gallon center tank attracted thousands of visitors to this previously underutilized and decaying area of the city. It is this same farsighted thinking, together with a responsibility to meet growing public demand and a commitment to remain at the forefront of scientific and exhibition developments, which has instilled in the Aquarium's leaders a new concern for growth.

Twenty years ago, the Aquarium's founders planned and built a facility designed to accommodate 600,000 visitors a year. With today's audiences exceeding 1,100,000, the Board of Trustees is now seriously considering major expansion plans. An expanded Aquarium would greatly enhance the scale and diversity of the Aquarium's collection, better accommodate its audiences and provide educational services for school children who cannot come now because of capacity constraints. The Board and staff of the Aquarium are exploring the possibility of a mixed-use development on Central Wharf as a means of generating revenues to help fund this expansion.

This brief report summarizes a site study that has examined the potential for joint development at the New England Aquarium. The goal was to understand how the Aquarium's special and long-term needs--including site development, program expansion, and financial resources--might be supported by mixed-use development on the site. This study was undertaken by Skidmore, Owings & Merrill under the direction of The New England Aquarium and The Beacon Companies to test whether the concept of joint development has merit. Specific study objectives included the following:



- To prepare a general review of the site and its surroundings as a basis for site planning.
- To review the projections of future Aquarium needs and evaluate the potential of the site to accommodate expansion.
- To examine the types of uses that might be compatible with Aquarium operations and be appropriate for this site.
- To consider the impact of regulations and development restrictions that will affect future development.
- To establish site design principles to guide future consideration of joint development.

The process of the study included interviews with Aquarium staff, review of existing site information, review of regulations affecting site development, and the preparation of drawings summarizing key site planning issues.

Study findings are presented here in three sections:

- Site Analysis which considers urban design, circulation and environmental conditions.
- Program Investigations which reviews the compatibility of various potential uses with Aquarium needs and site conditions, and
- Site Planning Principals which provide an appropriate framework for future development.








## Site Analysis

A number of individual factors were considered in order to develop a clear understanding of the site and its potential. Historical data was assembled to review the character of the site as it has evolved over time. Survey information was reviewed. Current zoning, the zoning overlay district, and various environmental standards for new development were consulted. The existing Aquarium facility was studied, and discussion about future needs undertaken. Circulation diagrams were prepared, and urban design studies assembled. A diagram of key site opportunities and constraints was prepared, based upon an evaluation of these various site characteristics. Several representative diagrams from the site analysis phase of the study have been assembled for review in this summary.

The analysis of existing site qualities is summarized on the following three maps relating to the urban structure of the area, vehicle and pedestrian circulation needs and general opportunities and constraints for Aquarium expansion and development. Some highlights of that analysis include:

- The "forecourt" to the Aquarium site which lies between the New England Telephone Building and the Harbor Towers parking garage is in very poor condition, and its current use detracts substantially from the experience of arriving at the waterfront and the new England Aquarium. Two street ends filled with traffic surround a rental car lot at a key pedestrian and vehicular entry to the site. Reorganization of this space in a way that will be more suitable for future Aquarium site needs should be considered as part of future plans.
- The pedestrian walkways around the edge of the Aquarium pier are in significant disrepair in some locations. These walkways will form a very desirable part of future site plans, and their reconstruction or reconfiguration should be taken into account.
- Bus loading and unloading is an important function which is not well accommodated by the existing street and curb layout.
- Aquarium service functions (truck deliveries) occur near the main public entrance and conflict with pedestrian use and access.
- The current location of the "Discovery" should be reconsidered as redevelopment occurs. In order to take advantage of the views and pleasant qualities of the south edge of the pier, there may be an opportunity to relocate this floating facility to the end of the pier.
- The width of the Aquarium pier can accommodate efficient below-grade parking which can help serve the Aquarium site parking needs.





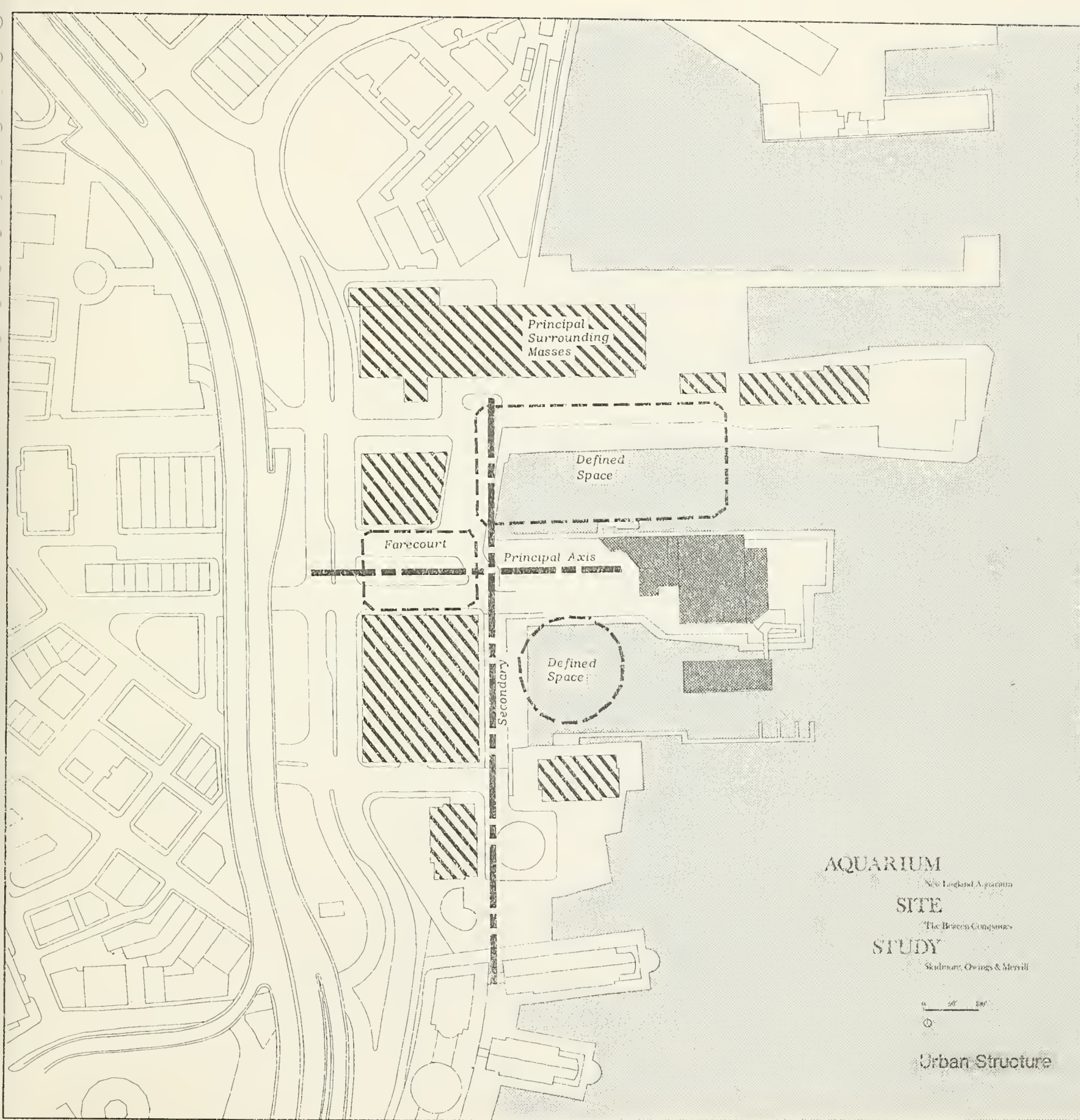
## Urban Structure

This diagram summarizes the basic structure of the spaces and buildings that surround the Aquarium site. The main approach to the site is well defined by a principal axis that reaches to the Aquarium entry. At right angles to this is the waterfront edges, a secondary axis. The surrounding building masses seem to enclose the Aquarium, and define two distinct spaces - the large slips to the north and the south of the Aquarium pier. These spaces, with their water activities, become focal elements around which development has gathered.

### Urban Structure

The diagram illustrates the basic structure of the urban and building form. The urban approach to the site is well defined by a principal axis that connects to the urban network. At right angles to this is the secondary axis, which is the secondary axis. The surrounding building mass is defined by the principal axis and the secondary axis. The urban approach to the site is well defined by a principal axis that connects to the urban network. At right angles to this is the secondary axis, which is the secondary axis. The surrounding building mass is defined by the principal axis and the secondary axis.





Principal  
Surrounding  
Masses

Defined  
Space

Farecourt

Principal Axis

Defined  
Space

Secondary

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Urban Structure



## Vehicle and Pedestrian Circulation

The careful consideration of pedestrian and vehicle paths near the Aquarium is an essential part of planning for the future, because of the dense use of the waterfront and the circulation needs of Aquarium patrons.

Major pedestrian links between the downtown and the Aquarium exist along the extension of downtown streets - State Street, Milk Street, and Central Street. Another, increasingly important connection is along the "Walk to the Sea" that connects the Quincy Market with Long Wharf and the adjacent public parks. These paths are joined along the water's edge and lead to the Aquarium. Another major pedestrian link is to the Aquarium "T" stop at the edge of the Marriott Hotel.

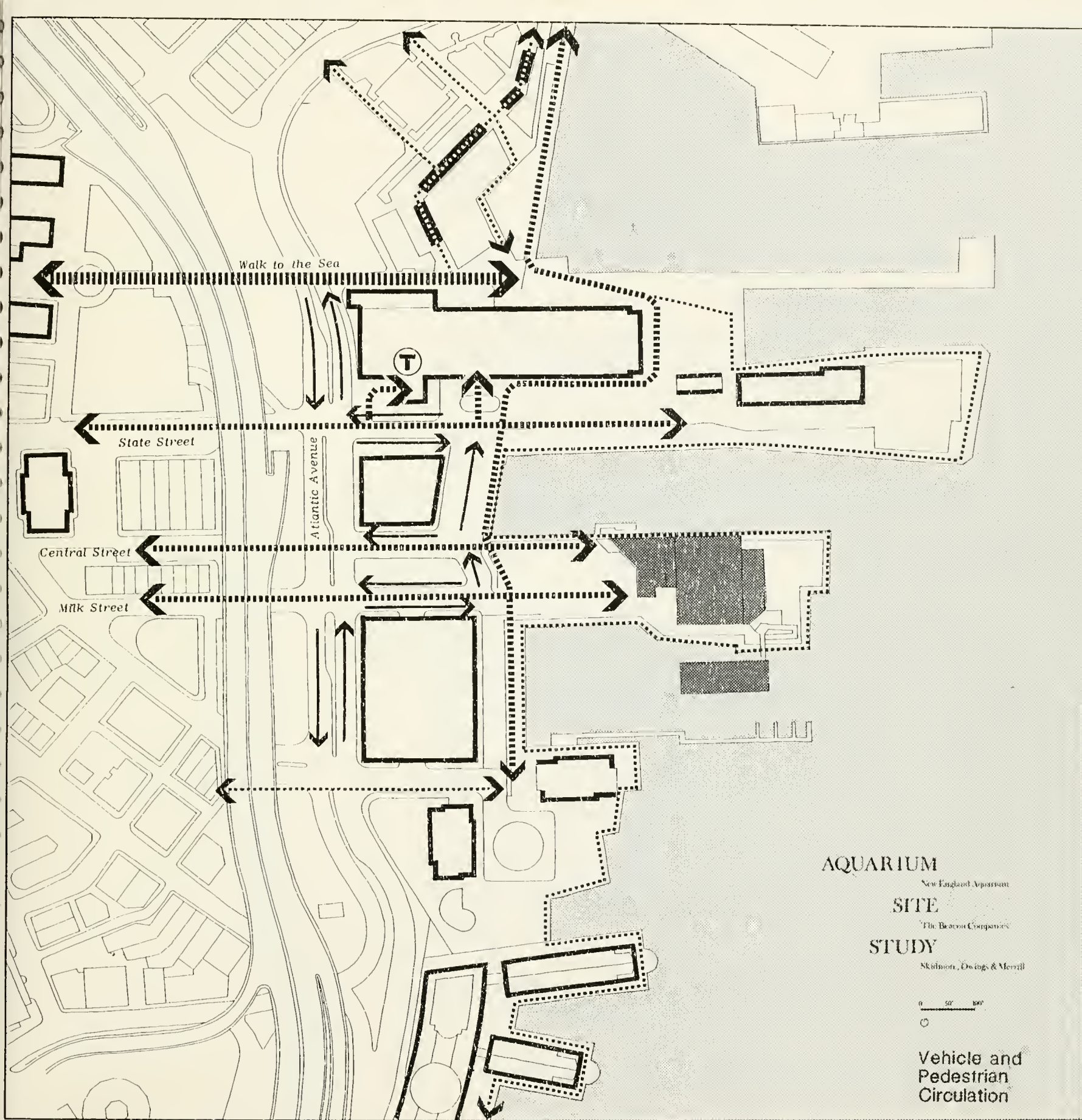
The diagram notes that continuous pedestrian access to the perimeter of all waterfront development is a requirement that has resulted in an important walkway system which includes the perimeter of the Aquarium site.

Vehicular circulation near the Aquarium is difficult under existing conditions. Confusing circulation patterns at Milk and Central Streets conflict with pedestrian patterns and make pick-up and drop-off functions for the Aquarium difficult.

There appears to be tremendous potential to improve the arrival sequence at the Aquarium--both for vehicles and pedestrians--with the analysis and redesign of the area between Atlantic Avenue and the Aquarium.











## Opportunities and Constraints

The qualities of the Aquarium site may be described as a series of opportunities for improvement and change, as well as a significant constraint on the character and location of future development. Some of the key characteristics which have been noted in this study include:

- The buildings facing the site are generally of high quality and contribute to the character of the waterfront.
- Excellent views of Boston Harbor from the site are afforded to the south; buildings along Long Wharf obscure views to the north.
- Pedestrian and vehicular access to the waterfront will be substantially improved when the Central Artery depression is completed.
- The open space which lies between the site and Atlantic Avenue is an important "foyer" for the site. However, the duplication of streets and the presence of a rental car lot seriously detract from the image and function of the space.
- The southern edges of the pier are preferred for public open space, because of sun exposure and wind protection.
- The boundaries of the Aquarium parcel would allow for pier expansion both to the east and south. Water related and public uses would be most appropriate.
- The location of the "Discovery" can vary as Aquarium expansion plans require.

## Opportunities and Constraints

The position of the station site  
may be described as a series of  
opportunities and constraints and  
obstacles, as well as a situation  
conducive to the station and  
location of future development.  
Some of the key opportunities  
which have been noted are the  
following:

• The buildings facing the site  
are generally of high quality  
and contribute to the character  
of the station.

• Excellent views of London  
from the site and  
access to the river and  
parks along the river.  
Opportunities for the site.

• Excellent and excellent  
access to the station will  
be maintained throughout the  
the Central Area Development  
is complete.

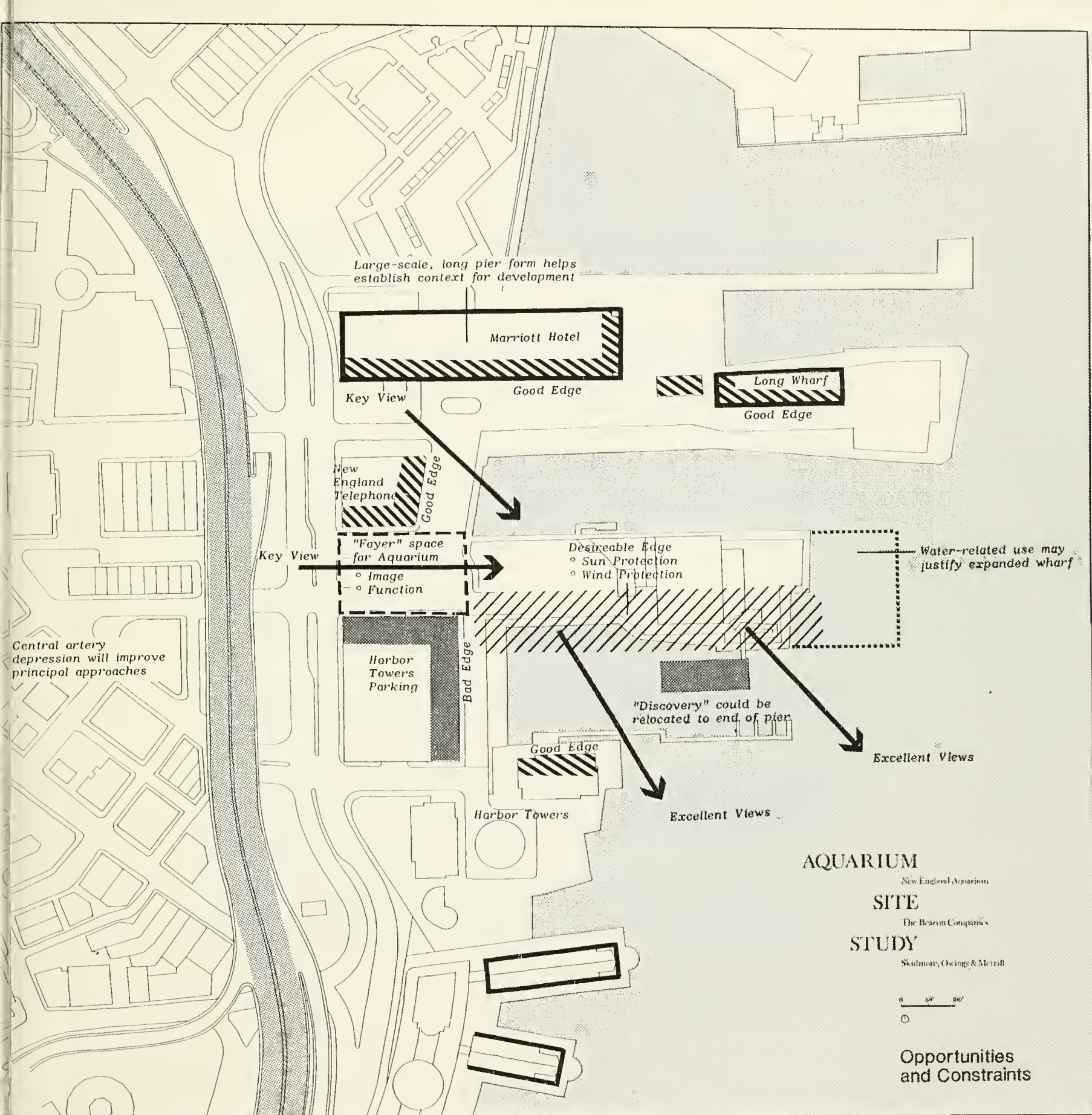
• The open space which lies  
between the site and the  
river is an important asset  
for the site. However, the  
duplication of streets and the  
presence of a road can be  
seriously detract from the image  
and function of the area.

• The station site of the site  
are protected for public open  
space, because of the  
historic and world importance.

• The importance of the  
Admission point would allow  
the site to be used for the  
and public use would be used  
appropriately.

• The location of the "Exhibition"  
and very of Admission  
Exhibition from the site.









## Program Investigations

The investigation of alternative site programs served to focus the discussion on reasonable proposals for joint development. A range of potential uses for the Aquarium site and the amount of potential new development were both considered.

The range of uses initially considered for the site included offices, residences, a hotel, a marine conference center, and a retail/entertainment complex. Uses were evaluated based upon several criteria including building form, access and orientation, and compatibility with the Aquarium's plans and public purpose. A marine conference center and hotel emerged as the only strong program options meriting further study.

Office development does not seem promising, partly because of the large floor plate that would be needed to be built in order to have an efficient and marketable office building. If this bulk were located to the west of the existing Aquarium, it would block access to the Aquarium entrance. Access to office development to the east of the Aquarium building, would be difficult to provide without compromising the approach to the Aquarium.

Housing development on this site would result in multiple conflicts with the Aquarium uses. These conflicts relate to circulation, security and privacy. In addition, the preferred housing location at the east end of the pier has the same access problems as noted above for office.

Any major retail or entertainment development would require substantial building and parking area in order to be economically viable. The intensity of use anticipated would overwhelm the site and diminish the potential for Aquarium use.

A hotel seems very promising to consider. Hotels are a public use, and are generally encouraged at waterfront locations. The public nature of this use compliments the Aquarium's goals. Although the location of a hotel to the east of the existing Aquarium seems impractical because of access issues, the location of a long, narrow hotel to the west of the existing Aquarium would be feasible.

A Marine Conference Center offers the potential to meet a pressing need in Boston for meeting space and at the same time better satisfy Aquarium requirements for educational, research and meeting facilities.



## Site Planning Principles

Based on the results of the site study, a series of general site planning principles can be listed that can serve to guide future consideration for joint development. These principles are summarized below.

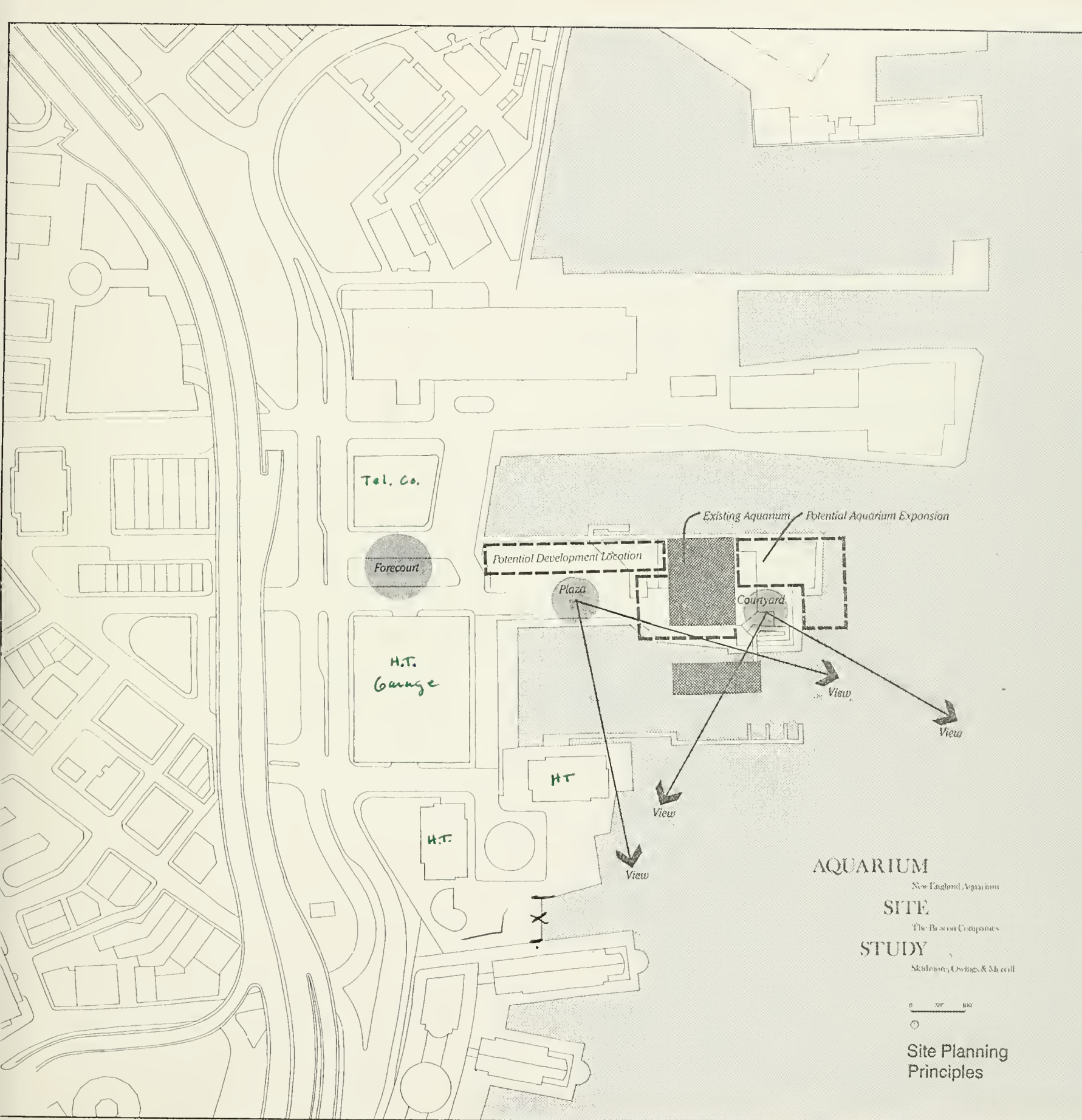
1. Joint development uses that are most feasible are a hotel and the form of the buildings and their public character make them an attractive partner on the site.
2. Joint development on the site will be most feasible if it is located to the west of the existing Aquarium building in a band on the north side of the site.
  - In order to allow redevelopment of this portion of the site, the existing auditorium may need to be relocated.
  - This area will be adequate to accommodate hotel development at a scale necessary to make the project feasible. This site arrangement would leave substantial space for a public plaza leading to the Aquarium, which could be animated by uses in the ground floor of hotel development.
  - Widening of the south edge of the wharf along the west of the existing building may be desirable in order to expand the public open space.
3. Additions to the New England Aquarium may best be located to the east of the existing structure, and as increments to the south or west of the existing building.
  - There is substantial area on the existing pier that is available for new construction that cannot be easily used for other types of uses.
  - Aquarium expansion to the east will allow for the greatest public access to the harbor and water views - and for the greatest flexibility in accommodating special programmatic requirements (large tanks, etc.).
  - New public spaces can be created that work in association with the Aquarium.
  - Strong architectural identity from the water side anticipated for the Aquarium.



4. The marine conference center should be physically integrated with both the Aquarium and hotel facilities.
  - Several locations to the west and south of the existing building appear feasible and can actually enhance the entrance to the Aquarium.
5. The existing car rental space and street immediately west of the wharf could be converted into a pleasant Aquarium forecourt that will also accommodate temporary vehicular functions (pick-up and drop-off) and a ramp to below grade parking.
  - This space can extend the special image and character of the Aquarium plaza towards the main entry points to the site.
  - The arrival sequence to the Aquarium is very important, and sets the tone for the visitor's experience. Redevelopment of the "forecourt" is an opportunity to create an exciting front door to the Aquarium and to the waterfront.
  - Reorganization of this area will require the cooperation of the City of Boston and the Boston Redevelopment Authority.
6. Pick-up and drop-off areas should be arranged at curbside to allow for adequate service for the Aquarium and the new site uses.
7. Service access for new site uses and for the Aquarium should be combined and concealed, either within a new building mass or below grade. This would represent a significant improvement over current operations.
8. Parking to serve the site could be located below grade, perhaps extending under the "forecourt" area; entrances, vents and stairwells should not intrude into the public open space.
9. Access and adequate service areas will need to be retained for the Whale Watch and Aquarium boats along the edge of the pier.
10. The "Discovery" may be moved to the end of the Aquarium wharf as redevelopment occurs. This could improve the circulation patterns along the south edge of the pier.







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Site Planning  
Principles



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